

ABSTRACT

[0059] Systems and methods are disclosed for coherent combination of beams or waves from two or more gain media. The gain media may be arranged in an unstable resonator having a magnification factor. The output beams or waves from the gain media are expanded within the resonator due to the magnification of the unstable resonator and are combined coherently. The gain media may be laser media producing an output by stimulated emission or the gain media may be parametric gain media producing one or more outputs by parametric or three-wave interaction. A heat-conducting element may be in contact with and remove heat from the gain media.